

Listing of Claims:

1. (Previously Presented) A method of producing a closed container with a tight and mechanically strong seal by fastening together:

a metal body having a central axis with a shape that is one of cylindrical and prismatic, said body having an open top axial end, a closed bottom end, and at least one axial wall between the open end and the closed bottom end and being parallel to said central axis, the at least one axial wall having an end face parallel to and opposite the closed bottom end; and

a metal cover having an axis coaxial with said central axis of said body and at least one end wall parallel to said central axis to be positioned at said top axial end of said body facing said at least one end face of the axial wall of said body;

wherein the method comprises the following two steps in succession, carried out in a hostile environment in an automated manner, under remote control:

docking said body and said cover so that said end face of the axial wall of said body in the vicinity of said open top thereof and said end wall of said cover face each other and are maintained in contact; and

producing a continuous penetrative weld over the entire periphery of said cover and said body at the ends of their respective walls which are maintained in contact.

2. (previously presented) The method of claim 1, wherein said first docking step comprises a guided approach of said cover and said body, a docking guide being arranged in the internal structure of one of said cover and said body.

3. (previously presented) The method of claim 1, wherein said weld is produced without spot welding, and further comprising the step of exerting a force on at least one of the ends of the walls of said body and said cover to thereby maintain said body and said cover in contact during welding.

4. (previously presented) The method of claim 1, wherein said weld is produced without a filler metal.

5. (previously presented) The method of claim 1, wherein said weld is produced by open jet plasma process with melt-bath back cover and further comprising the step of limiting the internal overpressure in the container produced.

6. (canceled)

7. (previously presented) The method of claim 1, wherein said weld is produced with the container substantially in the vertical position, with the weld axis substantially horizontal.

8. (previously presented) The method of claim 7, wherein said weld is produced with the container being fixed and with a welding head which is rotated around said container at the level of the ends of the walls maintained in contact.

9. (previously presented) The method of claim 1, wherein the method is carried out to produce a closed container for confined packaging and storage of hazardous waste.

10. (withdrawn) A closed container with a tight and mechanically strong seal the structure of which comprises two metal elements of the following type fastened one with the other:

a) a body with an essentially cylindrical or prismatic shape having a base with one or more axial walls and an open top axial end; and

b) a cover with a more or less complex shape, having one or more walls to be positioned at the top axial end of said body facing the axial wall(s) of said body in the extension thereof; characterized in that:

- the fastening is of the butt weld type, advantageously with no filler metal;
- its internal structure at the weld line includes a docking guide which has:
 - at the weld line, on the wall side, a groove provided with at least one degassing chimney;
 - a chamfered end above or below, preferably above said weld line, on the wall side;
- its body and/or its cover advantageously its cover include(s) at least one blanked off degassing vent.

11. (withdrawn) The container according to claim 10, characterized in that said docking guide is machined in the bulk of the body or the cover, advantageously machined in the bulk of the body, or consists of an insert spot welded to said body or to said cover.

12. (withdrawn) Elements of the type:

a) a body with an essentially cylindrical or prismatic shape having a base with one or more axial walls and an open top axial end;
or (and)

b) a cover the shape of which may be more or less complex, having one or more walls to be positioned at the top axial end of said body facing the axial wall(s) of said body in the extension thereof;

said elements of type a) and b) being intended for fastening to each other, more particularly by carrying out a method according to claim 1, to produce a closed container with a sealed closure which is mechanically strong;

characterized in that the internal structure of one of said elements comprises, over its entire periphery, fastened beyond the end of its wall(s) intended to be fastened to the end of the wall(s) of the other element and extending beyond said end, a docking guide which has:

- beyond said end on the wall side, a chamfered end which, during docking, can guide and position the other element; and

- at said end, also on the wall side, at which welding will be carried out, a groove provided with at least one degassing chimney which can evacuate the overpressure generated to the inside of the container;

one and/or the other of said elements, advantageously the cover 2, having at least one degassing vent, which is accessible to the gas evacuated from said groove of said docking guide *via* said degassing chimney during welding and which can be blanked off once the weld is complete.

13. (withdrawn) The element according to claim 12, characterized in that said docking guide is machined in the bulk of said element, the body or the cover, advantageously machined

in the bulk of said body, or in that said docking guide consists of an insert, spot welded to said element, the body or the cover.

14. (withdrawn) A metal part intended to be attached by welding to the periphery of the internal structure of a body or a cover of a metal container at a position at which said body or said cover has an essentially cylindrical or prismatic shape and at which said body and cover are intended to be fastened by a weld, characterized in that the outer periphery of its structure, which is of a suitable shape, has the following:

- a groove provided with at least one degassing chimney; and
- a chamfered end.

15. (previously presented) The method of claim 9, wherein said hazardous waste is nuclear waste.

16. (previously presented) A method of producing a closed container with a tight and mechanically strong seal by fastening together:

a metal body having an axis with a shape that is one of cylindrical and prismatic, said body having a base with at least one axial wall parallel to said axis and an open top axial end; and

a metal cover having an axis coaxial with said axis of said body and at least one end wall parallel to said axis, said end wall of said cover to be positioned at said top axial end of said body facing said at least one axial wall of said body;

wherein at least one of said body and said cover includes a docking guide having a groove therein, said groove including a degassing chimney;

wherein at least one of said body and said cover includes a degassing vent; and

wherein the method comprises the following steps, carried out in a hostile environment in an automated manner, under remote control:

docking said body and said cover so that said axial wall of said body in the vicinity of said open top thereof and said end wall of said cover face each other and are maintained in contact, said docking being performed by guiding said cover and body together by said docking guide;

producing a continuous penetrative weld over the entire periphery of said cover and said body at the ends of their respective walls which are maintained in contact, said weld being produced by open jet plasma with melt-bath back cover, wherein said open jet opens into said groove;

limiting the internal overpressure in the container produced; and

blanking off said degassing vent after said weld has been produced.

17. (Previously Presented) The method of claim 1, wherein the end face of the axial wall of said body is substantially perpendicular to the central axis.

18. (Previously Presented) The method of claim 1, wherein an outer surface of the at least one axial wall of the body and an outer surface of the at least one end wall of the cover are substantially coplanar.